

**In The Application Of**

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**For A**

**CONE CLIP RACQUET PICK**

**Filed With The**

**United States Patent and Trademark Office**

## **BACKGROUND OF THE INVENTION**

### **Field of the Invention:**

The present invention is a cone-clip racquet pick, which enables a player engaged in a sport requiring a stringed racquet, such as tennis, racquetball, squash, and badminton, to realign strings that have become misplaced. The cylindrically shaped device has a conical shaped end which may be inserted between the space of the strings that require straightening. By applying pressure, the strings become optimally and evenly placed. Importantly, a stop means functions to prevent the device from being inserted into the space beyond a desired degree.

Moreover, in one embodiment, the lifting of a cap at the upper portion of the device reveals a hollow cavity in which small items such as pills may be stored. In an additional embodiment, the device is of a two-piece construction in which upper and lower members are conveniently screwed to one another, allowing the user to easily access the hollow cavity. Furthermore, the device may provide a clip means for conveniently fastening the implement to an article of clothing. Finally, the device may provide an aperture that enables same to be attached to a key ring or string for carrying purposes.

## **Description of the Prior Art:**

Numerous innovations for racquet tools have been provided in the prior art that are described as follows. Even though these innovations may be suitable for the specific individual purposes to which they address, they differ from the present invention as hereinafter contrasted. The following is a summary of those prior art patents most relevant to the invention at hand, as well a description outlining the differences between the features of the present invention and those of the prior art.

### **1. United States Patent D467,477, invented by Berens et al., entitled "Racket String Straightener"**

The patent to Berens et al. depicts an ornamental design for a racket string straightener, as shown and described.

### **2. United States Patent 4,752,071, invented by Tabach, entitled "Method Of Aligning Strings In A Racket"**

The patent to Tabach describes a device for straightening misaligned strings of a stringed racket, including an elongated rigid member forming a substitute finger. One end of the device includes a gripping member for gripping the device and a hook is supported from the other end of the elongated member and extending transversely thereto. The hook has both forwardly facing and

rearwardly facing bent portions, so that it may be used alternately for pushing or pulling a selected string.

3. United States Patent 5,310,181 invented by Chan, entitled "Racquet String Aligner"

The Chan invention pertains to a novel aligner which can be used to space evenly the strings of a sports racquet. More particularly, this invention pertains to a novel racquet string aligner which can accommodate different racquet string spacings and can be used as the cap for a typical container for tennis balls. A racquet string aligner for aligning the strings of a racquet comprising: a base member; a tapered central projection on the base member having a topography that tapers away from the base member; at least one tapered first projection adjacent the central projection the base of which is located a first radius from the center-point of the central projection, and at least a portion of the upper surface of which has a first slope in the direction of the central projection; and at least one tapered second projection the base of which is located at a second radius from the center-point of the central projection greater than that of the first radius and at least a portion of the upper surface of which slopes in the same direction as the slope of the first projection in the direction of the central projection to a degree smaller than the first slope.

4. United States Patent 5,207,423, invented by Short, entitled "Tennis Racket String Straightener"

Short's tennis racket string straightener is a one-piece unitary pocket comb, preferably of molded plastic, with an elongated body and spaced integral teeth depending therefrom along the length thereof. The body has curved ends to prevent pocket snagging and includes a vertical lower plate from which the teeth depend, and a top horizontal flange acting as a hand grip. The plate is integral with the flange and connected thereto along the longitudinal center-line thereof. The teeth in one embodiment are all the same size and spacing. In another embodiment the teeth are of generally similar shape and size but the distance between adjacent teeth gradually increases the farther the teeth are away from the mid-point along the length of the comb. The teeth are generally triangular in front, rear and side elevation, thus generally wedge-shaped with apices pointing down, and the spaces defined thereby are generally triangular with their apices up. All apices are slightly rounded to prevent string damage. The sides of the teeth are recessed to provide raised rims. The rims, teeth, flange and plate are not more than about 1/4 inch thick for maximum dimensional stability during molding.

5. United States Patent 4,776,591, invented by Ho, entitled "Racket String Straightener"

Ho's racket string straightener includes an elongate holder having a straight row of individually slidable teeth mounted therein. Each tooth has a string-receiving notch, and the notches

are aligned along the row so as to straighten a string received therein. An aperture is provided in each tooth so as to extend transversely to the longitudinal axis of the holder, for receiving a string transverse to the string to be straightened.

6. United States Patent 4,089,523, invented by Newbureger et al., entitled "Aligning Tool For Strings Of A Racket"

The patent to Newbureger et al. describes an aligning tool for realigning misaligned strings in the central zone of the string network of a racket after heavy use to return the strings in a normal predetermined spacing, which tool includes a plurality of spaced right pyramidal projections extending from a base, the tool projections being adapted to be inserted between the strings to force misaligned strings of the racket back to a normal aligned condition.

7. United States Patent 4,733,866, invented by Herbert, entitled "Portable String Aligner For Rackets"

The patent to Herbert describes a portable string aligner for tennis rackets, racquetball rackets, and for other game equipment in which a racket is used. The aligner combines an elongated rectangular base member with multiple spacing pegs removably fitted in a retainer track. The spacing-peg tops protruding externally through a track opening in one surface of the base member are of sufficient length and are shaped to fit through the squares formed by the vertical and horizontal

cross-over of the racket strings in a strung racket head. By hand pressuring the spacing pegs through the racket string squares, the racket strings can be restored to proper alignment on the court during pauses in play.

8. United States Patent 5,441,258 invented by Pagan, entitled "Racket String Alignment Tool"

The patent to Pagan describes a tool for aligning the strings of a racket, the tool having a base, a support bracket attached to the base for pivotally securing the racket to the base, a positioning pin for positioning the racket in a predetermined location on the base, and an array of spaced alignment pins projecting upward from the base for aligning the racket strings in predetermined positions.

9. United States Patent 5,823,900, invented by Harren et al., entitled "Process And Device For Bringing Into Alignment The Strings Of An Interlaced Network"

The Harren et al. device is used for aligning the strings of the netting, and particularly the netting of a tennis racket. In order to align the strings of the netting in a simple, accurate, quick and effortless manner, without damaging the strings, the aligning device has semi-ellipsoidal, semi-circular or oval platelets that act on the strings at their crossing points.

10. United States Patent 5,035,429, invented by Redrow, entitled "String Straightener For Tennis Racket"

The Redrow device is adapted to be placed on the strings in the head of a tennis racket adjacent a bowed or displaced string in the woven pattern of strings, which device can be manually manipulated to move the string back to its a correct position in the woven pattern. The string straightener is constructed to automatically adjust itself to be fitted to any conventional woven string pattern in the usual form of tennis rackets.

11. United States Patent 5,653,441, invented by Woltanski, entitled "Racket String Comb"

The Woltanski invention relates to a racket string comb, to be used on the strings in the head of a tennis, racquetball, squash or badminton racket, that can be manually manipulated to move the strings back to their correct position. The improved tennis racket string straightener is a one-piece pocket comb, preferably of molded plastic, which consists of a comb body and integrally placed, widely spaced, narrow claws depending therefrom, along the width thereof. The claws in the preferred embodiment are all of the same size and spacing. The comb body has a handle extended from the comb body at a generally fortyfive degree angle, rounded at the bottom to provide finger comfort and prevent pocket snagging.

12. United States Patent 4,336,882, invented by Sakwa, entitled "Pen Pill Container"

The patent to Sakwa describes a container in the form of a pocket pen which is formed with a plurality of compartments for containment of medical pills and is fitted with a container for dispensing of powders such as dietetic salt or sugar substitutes. The device appears to be in the form of a conventional pocket pen fitted with a conventional removable cap section. A pill chamber in the cap section is capped by a removable hollow plug unit at the end of the cap section for containment and dispensing of powder. The plug unit is fitted with an external rotatable cover formed in one radial section of the cover with perforations and with the external cover rotatably joined to an interior cover by a rivet with an opening in the interior cover located so that the exterior cover may be rotated so as to either close the opening of the interior cover or to align that opening with the perforations of the external cover. The body section of the device is formed with two pill chambers separated by a transverse fixed partition, with one pill chamber capped by a removable plug unit incorporating a ball point and the other pill chamber capped by a removable hollow plug unit similar to that of the cap section for containment and dispensing of powder. Each of the three plug units is formed with a flange on which numerals, separating hours of the day, are marked, and fixed indicia are located on the exterior of the body and cap sections so as to align with a numeral of a plug flange.

As noted above, the patents that relate to string-straightening devices mostly entail large devices that are intended to align large areas of racquet strings simultaneously. In contrast, the present invention provides a small, lightweight and compact device that may be conveniently carried on a user's person or clipped to an article of clothing.

Although some issued patents illustrate smaller tools designed for string alignment purposes, such bear a substantially different shape than that of the present invention (i.e. Design Patent D467,477 to Berens). Moreover, although receptacles for pills or other small items are known in the art (i.e. Patent 4,336,882 to Sakwa, last above-listed), no patented racquet string-alignment tool teaches the usage of such a feature.

## **SUMMARY OF THE INVENTION**

As noted above, the present invention is a cone-clip racquet pick, which enables a player engaged in a sport requiring a stringed racquet, such as tennis, racquetball, squash, and badminton, to realign strings that have become misplaced. The cylindrically shaped device has a conical shaped end which may be inserted between the space of the strings that require straightening. By applying pressure, the strings become optimally and evenly placed. Importantly, a stop means functions to prevent the device from being inserted into the space beyond a desired degree.

Moreover, in one embodiment, the lifting of a cap at the upper portion of the device reveals a hollow cavity in which small items such as pills may be stored. In an additional embodiment, the device is of a two-piece construction in which upper and lower members are conveniently screwed to one another, allowing the user to easily access the cavity. Furthermore, the device may provide a clip means for conveniently fastening the implement to an article of clothing. Finally, the device may provide an aperture that enables same to be attached to a key ring or string for carrying purposes.

In light of the foregoing, it is generally an object of the present invention to provide a product that may be effectively used in a variety of sporting activities in which a stringed racquet is utilized.

It is another object of the invention to provide a lightweight, compact device that is easily used to realign racquet strings, functioning to maintain the effectiveness of the racquet to the benefit of the user.

It is a further object to provide a device that is simple to manufacture, requiring substantially few parts for effective construction.

It is also an object of the present invention to provide a device that is carried on one's person and that may removably contain pills or medicine for emergency purposes.

It is a further object of the invention to provide a device that is easy for the user to locate and access upon need.

In addition, it is an object of the present invention to provide a device that is substantially inexpensive for purchase by the user.

It is a further object of the invention to provide an item that may be constructed of a variety of previously-existing materials that are cost-effective and convenient for the purposes of manufacture.

Finally, it is an object of the present invention to provide an item that is durable and that maintains its effectiveness for extended periods of time.

The novel features which are considered characteristic for the invention are set forth in the claims. The invention itself, both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best understood from the following description of the embodiments when read and understood in connection with accompanying drawings.

## **BRIEF DESCRIPTION OF PREFERRED EMBODIMENTS**

FIGURE 1A is a perspective view of the present invention, illustrating the principal components thereof.

FIGURE 1B is a top view of the present invention in the preferred mode.

FIGURE 1C is a bottom view of the present invention in the preferred mode.

FIGURE 2 is a perspective, partial cutaway view of one embodiment of the present invention along Line “2, 3” of FIGURE 1B, illustrating a two-piece housing with threaded attachment means.

FIGURE 3 is a perspective, partial cutaway view of an additional embodiment of the present invention along Line “2, 3” of FIGURE 1B, illustrating a single-piece housing with hinged cap.

## **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

The following description relates to: FIGURE 1A, which is a perspective view of the present invention, illustrating the principal components thereof; FIGURE 1B, which is a top view of the present invention; and FIGURE 1C, which is a bottom view of the present invention:

In the preferred mode, the cone clip racquet pick comprises a shaft comprising lower portion (12), which comprises a conical tip (12A). The conical tip (12A) is of an appropriate diameter for insertion into a space existing between strings of a racquet, such as that used in the sports of tennis or racquetball. As shown in FIGURE 1A, the above-mentioned lower portion (12) of the device is affixed to an upper portion (16), either in a single-piece or two-piece construction, as will be discussed in detail below.

The general construction of the present invention, with usage of the conical tip, enables a player engaged in a sport requiring a stringed racquet to realign strings that have become misplaced, as is frequently the case during play. Misalignment of the strings adversely affects the manner in which the ball moves off the racquet upon being struck, weakening the user's level of play.

Thus, the conical shaped tip of the cylindrically-shaped device is inserted by the user between the space of the strings that require straightening. By the user applying pressure and moving the device back and forth, the strings separate from one another to a previously-determined degree, to become optimally and evenly placed. Such restores the “sweet spot” of the racquet, providing the level of strength and stability needed for striking the ball with optimal performance.

In the preferred mode of manufacture, the device further comprises a clip (22), which functions to allow the device to be clipped to an article of clothing, such as a shirt pocket, for user convenience. The clip (22) extends downwardly from a top portion (24) of the upper portion (16) of the device and is generally parallel to and biased against the upper portion (16). The clip (22) functions much like that of a clip utilized on a traditional pen cap, enabling the user to conveniently carry the device on his or her person. As shown in FIGURE 1A, the device may provide an aperture within the clip (22), that enables same to be attached to a key ring or string for carrying purposes.

Moreover, in the preferred mode, the upper portion (16) of the device further comprises a friction means, such as a plurality of ribs (26), which function as gripping ridges to enable one to grasp and utilize the device without slippage. As such, a previously-determined quantity of parallel, line-type ribs or grooves (26) may be located on the upper portion (16) to allow for ease in grasping the device securely.

In the preferred mode, the invention further comprises a generally annular flared portion (30) extending slightly outwardly from the shaft at the lower portion thereof. The flared portion (30) functions as a “stop” to prevent the device from traveling through the space to an undesired degree. As such, the conical tip (12A) is of a length suitable to perform the string alignment tasks taught by the present invention, while allowing the invention to remain compact in nature.

Regarding an enhanced embodiment of the present invention, FIGURE 2 is a perspective, partial cutaway view of the present invention along Line “2, 3” of FIGURE 1B, in this instance illustrating a two-piece housing with a threaded attachment means.

Specifically, in this second embodiment, a generally cylindrical lower shaft (12) comprises a male threaded portion (14) at an upper portion thereof. A generally cylindrical upper shaft (16) comprises a female threaded portion (18) at a lower portion thereof, allowing the pieces to be conveniently screwed to one another. This construction allows for convenient and secure attachment of the upper and lower pieces. It should also be noted that the aforementioned plurality of ribs (26) are especially helpful in this embodiment, as such provide friction to facilitate rotation of the upper shaft (16) for removal of same.

In this embodiment, the invention further comprises a cavity in which articles may be stored. Specifically, unlike the prior art string-alignment implements, the present invention teaches the usage of a hollow interior of the shaft, in which small items such as pills or medicine may be removably contained. Thus, in addition to being an effective string alignment tool, the invention further functions as an emergency medicine carrying device in which vital medicine or pills are contained. Conveniently sized to keep on hand during tennis or racquetball play, the device may be easily opened, providing a means for one in medical danger to easily access vital medication. Moreover, additional instances in which the cavity may be useful to the player include the containment of allergy medication, as the device is often utilized in conjunction with outdoor sporting activity.

Regarding an additional embodiment, FIGURE 3 is a perspective, partial cutaway view of the present invention along Line “2, 3” of FIGURE 1B, illustrating a single-piece housing with a hinged cap at an upper portion thereof. Specifically, in this embodiment, upper shaft (16) further comprises a hinged cap or lid (32) at the top thereof, the opening of which reveals the cavity in which articles are removably placed, much in the manner described above with regard to the second embodiment of the present invention. The hinged cap or lid (32) may further comprise a lifting tab, which allows the cap or lid to be easily opened.

With regard to each of the above-described embodiments, it must be noted that the device may be constructed entirely of plastic, providing a lightweight construction that is inexpensive for manufacture and purchase.

Finally, it should be noted that any embodiment of the device may bear previously-determined text, graphics, designs, and colors thereon, such as corporate names and/or logos. Such provides an advertising opportunity which will enhance the overall marketability and value of the device.

With regards to all descriptions and graphics, while the invention has been illustrated and described as embodied, it is not intended to be limited to the details shown, since it will be understood that various omissions, modifications, substitutions and changes in the forms and details of the device illustrated and in its operation can be made by those skilled in the art without departing in any way from the spirit of the invention.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can readily adapt it for various applications without omitting features that, from the standpoint of prior art, constitute essential characteristics of the generic or specific aspects of this invention. What is claimed as new and desired to be protected by Letters Patent is set forth in the appended claims.